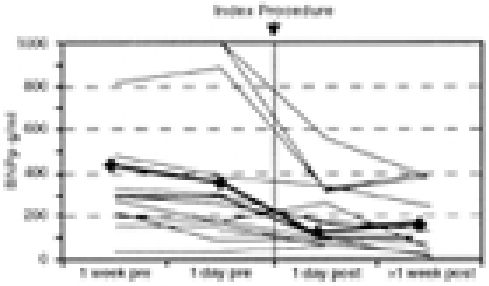
11:15 a.m.

877-4 Brain Natriuretic Peptide Is Increased in Patients With Renal Artery Stenosis and It Significantly Decreases After Endovascular Stenting

Jose A. Silva, Albert Chan, Stephen R. Ramee, Tyrone J. Collins, J. Stephen Jenkins, JP Reilly, Christopher J. White, Ochsner Clinic Foundation, New Orleans, LA

Background. Experimental studies in animals have shown that angiotensin II stimulates the release of brain natriuretic peptide (BNP) through a direct mechanism, independent of mechanical stretching. We hypothesized that BNP may be increased in patients with renal artery stenosis (RAS), a condition that leads to release of angiotensin II.
Methods and Results. We measured BNP in 17 patients with refractory hypertension and significant renal artery stenosis one week prior (n=13), one day prior (n=17), one day after (n=17), and one week (n=14) after successful renal artery stent placement. Compared to baseline, BNP dropped significantly (356 ± 382 vs 158 ± 143 pg/ml; p=0.009) within 24 hours of the successful renal stent procedure. Coincident with fall in BNP, the systolic blood pressure also decreased from 172 ± 16 mmHg to 134 ± 22 mmHg (p=0.0001).
Conclusion. BNP is increased in patients with significant RAS and decreases after successful renal stent placement. This finding may have important clinical implications in the future, such as helping to select which patients are most likely to respond to intervention.



11:30 a.m.

877-5 Short-Term Outcomes of Carotid Stenting in Low and High Surgical Risk Patients

Giora Weisz, Sriram S. Iyer, Jiri J. Vitek, Gishel New, Christina Brennan, Ian Dalagin, Gary S. Roubin, Lenox Hill Heart and Vascular Institute and Cardiovascular Research Foundation, New York, NY

Background: Recent studies has shown that compared to endarterectomy surgery, carotid stenting (CS) has superior short-term outcomes in patients (pts) that are at high surgical risk (HR). It is not clear however, whether low surgical risk (LR) pts are also at lower CS risk. We compared short-term outcomes of CS in HR vs. LR pts.
Methods: All CS (2/00-3/03) preformed with distal protection devices were analyzed. HR factors included: age ≥ 80y, prior ipsilateral endarterectomy surgery, prior neck surgery or radiation, contralateral occlusion, anatomic low or high lesion, and unstable/severe heart disease. Ptswere prospectively followed for 30 days.
Results: CS with embolic protection was performed in 588 arteries: 326 (55%) were found to be at HR, and 262 (45%) at LR. Comparing the two groups, baseline characteristics were similar except for the high risk features. HR pts were older (76 vs 69, p<0.001), since 43% of them were ≥ 80y. HR and LR pts had similar success rate of distal protection device deployment (98% both), and stent placement (98% vs. 100%, p=ns). The 30-day outcomes are shown in the Table.
Conclusions: (1) Carotid stenting with distal embolic protection has favorable low event rate, especially in low surgical risk patients. (2) Compared to high surgical risk pts, low surgical risk patients have a trend toward lower short-term major event rate after carotid stenting, but the differences did not reach statistical significance. (3) Carotid stenting should not be limited to patients at high surgical risk.

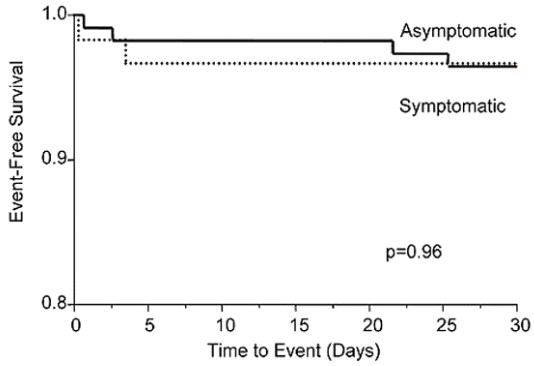
	High Risk	Low Risk	p-value
	n=326	*n=262*	
Minor Stroke	4 (1.2%)	3 (1.1%)	ns
Major Stroke	1 (0.3%)	1 (0.4%)	ns
Fatal Stroke	2 (0.6%)	0	ns
All Strokes	7 (2.1%)	4 (1.5%)	ns
All Death	4 (1.2%)	1 (0.4%)	ns
Death+Stroke	9 (2.8%)	5 (1.9%)	ns

11:45 a.m.

877-6 Symptomatic Patients Have Similar Outcomes Compared to Asymptomatic Patients After Carotid Artery Stenting With Emboli Protection

Michael H. Yen, David S. Lee, Samir Kapadia, Ravish Sachar, Jakob Schneider, Mary Ellen Satava, Christopher T. Bajzer, Deepak L. Bhatt, Jay S. Yadav, Cleveland Clinic Foundation, Cleveland, OH

Backgound: Guidelines for carotid endarterectomy recognize that the stroke rate is higher in symptomatic patients undergoing carotid endarterectomy (CEA) when compared with asymptomatic patients. Similar results have not been consistently demonstrated in patients undergoing carotid stenting (CAS) with distal emboli protection devices (EPD). We sought to determine whether symptomatic patients have increased major complications compared to asymptomatic patients after CAS with EPD.
Methods: We examined 174 consecutive patients who underwent CAS with EPD between January 2000 to September 2002. Symptomatic patients were defined as having an ipsilateral transient ischemic attack or stroke within 6 weeks prior to CAS. Among these patients, 60 (34.5%) were identified as symptomatic and 114 (65.5%) as asymptomatic. Event-free survival (death and stroke) at 30 days was determined.
Results: Baseline demographics among the groups were similar except for the symptomatic group having a higher frequency of past cerebrovascular events and the asymptomatic group having a greater incidence of past CEA. Use of glycoprotein IIb/IIIa inhibitors was similar. At 30 days, there were 4 events (3.5%) in the asymptomatic group compared to 2 events (3.3%) in the symptomatic group (Figure).
Conclusion: Unlike CEA, symptomatic patients do not have a higher risk of stroke and death when compared to asymptomatic patients after CAS with EPD.



ORAL CONTRIBUTIONS

878

Results of Coronary Stents

Wednesday, March 10, 2004, 10:30 a.m.-Noon
Morial Convention Center, La Louisiane A

10:30 a.m.

878-1 A Systemic Inflammatory Response Reflected by Increased Soluble CD40 Ligand Is Evident Within 10 Minutes of Coronary Stenting

Harold L. Dauerman, Atul Aggarwal, Burton E. Sobel, David J. Schneider, University of Vermont College of Medicine, Burlington, VT

Background: A significant elevation of markers of inflammation 24-48 hours after percutaneous coronary intervention (PCI) has been correlated with an increased risk of subsequent adverse events. To identify early mediators initiating the inflammatory cascade after stenting, we characterized concentrations of soluble CD40 ligand and other biomarkers after stent implantation.
Methods: Peripheral blood samples were obtained before stenting, and after 10 min, 1 hr and 18-24 hrs in 75 consecutive patients undergoing stenting. CRP (mcg/ml), Interleukin 6 (IL-6, pg/ml), interleukin 1 receptor antagonist (IL1 RA,pg/ml) and soluble CD40 ligand (sCD40L,ng/ml) were assayed in each sample by ELISA. Student's t test was performed to compare the pre-PCI and 10 minute post PCI arterial samples. Changes in concentrations of markers over the entire 24 hours was determined by repeated measure ANOVA.
Results: 88% of the patients had acute coronary syndromes. Peak CRP (14±14, P< 0.001 compared with baseline) and IL-6 (24±29, p < 0.001 compared with baseline) occurred at 24 hrs after stenting . Peak IL1 RA (665±477, p = 0.09 compared to baseline) occurred 1 hr after PCI. sCD40L peaked at 10 min (**Table**). Concentrations of the other biomarkers were not increased at 10 min post-PCI.
Conclusions: A systemic inflammatory response occurs very early, and is readily detectable as soon as 10 min after stent placement. The early increase of sCD40 ligand implicates it as an early mediatior in the inflammatory cascade induced by PCI.